

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: APR 19 1978

SUBJECT: Meeting with Prudhoe Bay Unit (PBU) Concerning  
PSD Requirements for Proposed Gas Turbine  
Additions to Prudhoe Bay Oil Field - April 14, 1978

FROM: Michael M. Johnston, Acting Chief  
Air Compliance Evaluation Section M/S 513

TO: File

Fourteen owners of the Prudhoe Bay Oil field comprise the "Prudhoe Bay Unit". The three major shareholders are Exxon, Sohio-BP, and Arco. It is expected that there will be considerable expansion of the existing facilities in the next ten years with this expansion being phased. The primary facilities requiring power consist of the central compression plant, the central power plant and the six flow stations. The primary method of power generation is gas turbine. Near-term add on power requirements call for 75,000 additional horsepower at the central compressor station in 1981 and 250,000 additional horsepower at the flow stations in 1982.


PBU expressed a concern over the one year requirement for monitoring data. In 1974, they collected approximately one year of non-continuous background data. Dean Wilson will see what data they have so that they can supplement this data to meet the PSD requirements. PBU is operating under a time constraint in that they must commit to equipment purchase in August of 1979. The closest upper air data available is from Nome. Upper air data is required to evaluate air quality impacts because of the uncertain plume rise characteristics of stationary gas turbine exhausts in an arctic environment. PBU indicated they would initiate a study to determine plume rise characteristics but could not complete such a study in time to impact the August 79 equipment purchase deadline. We suggested they substitute conservative assumptions for hard data to meet the August deadline.

The applicability of the PSD requirements to the project was discussed at length. The PBU expects that based on the 250 ton per year requirement, they will be subject to the PSD analysis for NO<sub>x</sub> at a minimum. PBU indicated they intend to treat each generating pad as a separate facility and apply for individual permits. The pros and cons of this approach were discussed from both EPA's and the Company's perspective. No conclusions in this regard were reached.






BACT and NSPS were discussed. PBU pointed out that the conditions under which equipment functioned in Alaska was very different than anywhere else in the United States. EPA responded that considerations could be made to accomodate the unique Alaska conditions.



cc: Tom Hanna  
Bob Chivvis





2

BACT and NSPS were discussed. PSU pointed out that the conditions under which equipment functioned in Alaska was very different than anywhere else in the United States. EPA responded that considerations could be made to accommodate the unique Alaska conditions.

We would be pleased to hear your comments on the issues associated with this project.

cc: Tom Hanna  
Bob Chivvis



PRE APPLICATION MEETING ARLO/SOHIO/EXXON PSD  
PRUDHIE BAY

1. DEAN A WILSON METEOROLOGIST/EPA 206-442-0887
2. MICHAEL JOHNSTON EPA - AIR COMPLIANCE 206-442-1387
3. DICK BAUER " " " " "
4. JOHN BOOKSTON EPA ATTORNEY (206) 442-1275
5. TOM TIBBITTS Exxon (213) 552-5714
6. C. Paul Falls A. R. Co. 907/265-6532
7. Richard V. Shafer Sohio/BP (907) 265-0174
8. **BARRY TOWNS** EPA (AIR monitoring quality assurance) 206 442-1106
9. LARRY L. SIMS EPA SURVEILLANCE & ANALYSIS 206-442-1106